CLAIMS (T34626)

What is claimed is:

1. A method of image filtering, comprising:

(a) computing edge intensity and direction for each pixel in an image;

(b) filtering said image with a filter which, for each pixel, smoothes in a direction parallel to the edge found in step (a) for said each pixel;

(c) interpolating said image and said filtered image from step (b) wherein said interpolating at said each pixel depends upon said intensity found in step (a).

2. The method of claim 1, wherein:

(a) said computing of step (a) of claim 1 includes

(i) computing variations in pixel values for horizontal, vertical, and diagonals at said each pixel; and

(ii) computing edge direction and intensity from said variations of (i).

3. The method of claim 1, wherein:

(a) said filter of step (b) of claim 1 for said each pixel is a rotation according to said edge direction of step (a) of claim 1 of a fixed filter.

4. The method of claim 1, wherein:

(a) said filter of step (b) of claim 1 for said each pixel is a matrix which depends upon $r = d_x/d_y$ with d_x is a measure of variation in the x-direction at said each pixel and d_y is a measure of variation in the x-direction at said each pixel.

5. The method of claim 1, wherein:

(a) said image is a color channel of a color image.